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CASE STUDY

BELGIUM

HEALTHCARE

HOSPITAL'S NETWORK TRANSFORMATION PAVES THE WAY FOR DIGITAL HEALTHCARE

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Modernise wired and wireless infrastructure to strengthen network security and simplify access for wave of new users and devices.

Every successful hospital is the same. No two hospitals are alike. All focus on patient care and the smooth running of critical systems. Each has its own unique challenges, be it staff shortages, budget, or ageing infrastructure. There are a thousand moving parts and never enough time.

"When I came to St Nikolaus three years ago, my first task was to make an inventory of what was working, what was doing ok and what needed looking at urgently," says Joffrey Kerrens, ICT Manager, St Nikolaus Hospital. "The network was more than ten years old. It was working, but not fit for the future."

TRANSFORMING A REGIONAL CENTRE OF EXCELLENCE

St Nikolaus is a 200-bed hospital in the east of Belgium, close to the border with Germany. In many ways it is no more remarkable than any of the country's other mid-size hospitals. But the work undertaken there is far from unremarkable.

The hospital sits at the centre of the healthcare ecosystem for this region of Belgium. The hospital treats more than 30,000 patients each year. It is a healthcare ecosystem that is increasingly connected and digitalised.

"We had so many users and devices connecting to the network – mobile phones, laptops, IP phones, medical devices," Kerrens explains. "All were connecting with little regard for security, and very little visibility."

With a team of just seven and many digital transformation projects competing for his time and resourc-

REQUIREMENTS

- Centrally manage and secure high-performance Wi-Fi across 40,000sqm campus
- Simplify adoption of digital applications and workstyles
- Deliver simplified operations and experiences for IT and end-users alike
- Future-proof network investment with roadmap to innovation ecosystem and AI-enabled tools

SOLUTION

- Aruba AP-515 Unified AP
- Aruba AP-365 series Outdoor AP
- Mobility Conductor
- Aruba 7220 series Mobility Controller
- Policy Enforcement Firewall (PEF)
- Aruba AirWave Network Management
- Aruba ClearPass NAC
- Aruba ClearPass VM
- Aruba CX 8325 series Core Switch
- Aruba CX 8320 Series Aggregation Switch
- Aruba CX 6300M series Access Switch
- Aruba NetEdit
- Aruba Central with device & Service subscriptions
- Dynamic Segmentation
- Aruba BLE Beacons
- Aruba Asset Tags

OUTCOMES

- Ensures seamless mobility across the hospital for medical teams, patients and visitors
- Strengthens network security with centralised control and visibility of users and devices
- Cuts Wi-Fi deployment times from days to hours and enables Zero-Touch deployments across the site
- Unifies high-performance wired and wireless architectures into a single, secure fabric
- Establishes a resilient, future-ready network infrastructure with the intelligence, scalability and intuitive toolsets to meet emerging needs

> When I joined three years ago, I was dreaming about the future of our network. Today, I can say the future of the network is in our hospital – and in our hands.
>
> **JOFFREY KERRENS**
> ICT Manager, St Nikolaus Hospital Eupen

es, Kerrens wanted a network upgrade that would strengthen security and simplify management processes: "I wanted a solution that not only addressed the realities of today but which would also prepare us for the future, driving efficiencies, improving security and delivering better experiences."

BUILDING CONFIDENCE IN THE FUTURE

The Aruba approach is built around the Edge Services Platform (ESP), an architecture which brings together the latest Wi-Fi 6 and Aruba CX Switching into a unified network, managed through Aruba Central, a single-pane cloud-native platform. Role-based network access control and Zero Trust security are hugely simplified by ClearPass Policy Manager, providing automation and seamless orchestration.

"In truth, our incumbent vendor did nothing to offer us a future vision," Kerrens explains. "With Aruba, the difference was immediate: an open system allowing us to integrate third-party technologies and the first manufacturer to provide Wi-Fi 6 with clear visibility of what is happening on the network as well as inherent security.

"We looked at several options but Aruba was the only one that proved its approach would work. It's not just marketing talk; Aruba took us to the lab and showed us."

ENABLING A SEAMLESS, WIRELESS EXPERIENCE

As of November 2021, the network upgrade is 80% complete. Where previously there were around 200 wireless access points, today St Nikolaus is blanketed with more than 600. Kerrens says the plan is to complete the 40,000sqm site by the end of the year.

"We can already see the difference in the 'old' and 'new' parts of the site," he says. "But hospitals are never a straightforward environment. We're operational 24/7 and the availability of our systems cannot be risked. The benefit of the secure, enterprise-grade Wi-Fi first approach - because there are no cables necessary - is the flexibility it offers for IT but also for the users.

"We've been able to install Wi-Fi very quickly. The architecture unifying the Aruba switches and wireless APs into a single secure fabric means that we don't have to manually manage VLANs for every connection. ClearPass has enabled us to benefit from the Aruba Dynamic Segmentation platform which detects, authenticates and connects any authorised user or device to relevant network resources and VLANs, based on their role, type and other policy-based parameters. Policies and required configurations are automatically passed to each switch without any manual intervention, avoiding errors and saving significant amounts of time. That is a huge difference in terms of resources needed to manage our operations."

Once complete, St Nikolaus will be able to provide a mobile-first experience for all users.

"Clinicians will be able to move freely around the site, from bedside to consultation rooms to open areas, without drop-off in connectivity," says Kerrens. "You open your laptop and you're connected."

ACCELERATING THE ADOPTION OF DIGITAL SOLUTIONS

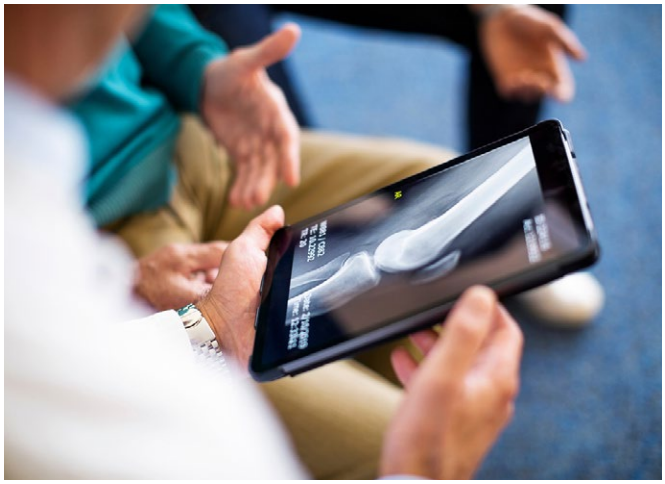
The upgrade will allow St Nikolaus to accelerate the adoption of new digital technology. From a patient perspective, it enables the use of smartphones and iPads in wards, making for a more pleasant, engaging stay. There will be a wayfinding app, in French and German, to help visitors find the right location. Operationally, there will be smart doors, asset tracking and environmental controls.

Aruba Bluetooth Asset Tags can be seamlessly integrated with the existing network through Bluetooth gateways integrated in the access points. Combined with the Aruba Meridian Location Services Platform and a bespoke app, the hospital will be able to tag and track valuable assets such as beds, wheelchairs or monitoring instruments, potentially saving hundreds of hours and vast amounts of money every year.

“The network upgrade was revolutionary. The next steps will be evolutionary,” says Kerrens. “We know the future will involve more devices and more connections but we can now try new ideas and move at our own pace.”

All of this can be managed simply and securely, with little management burden on Kerrens and team.

“Once you’ve registered on the network, ClearPass will recognise you and automatically log you on,” he says. “The advantage of the Aruba architecture is the open standards. We know we can integrate a range of specialist technology, medical or otherwise. It is not a closed ecosystem. That provides long-term assurance.”



CREATING THE SPACE TO CONSIDER INNOVATION AND SERVICE

The real impact is time. Like every hospital, St Nikolaus is constantly juggling a thousand different demands. The successful network upgrade removes a major headache from Kerrens’ to-do list, and frees time to consider new, more complicated challenges.

“We look after 700 users on the network, many of which need support on common, everyday issues. Having a network that is automated, secure and easy to view means we have more time to spend directly with colleagues,” Kerrens explains.

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